

**CLAIMS**

The following is claimed:

1. A system for checking the integrity of physical connections between a fuel injector assembly and at least one associated wire harness, comprising:

a support portion for supporting the fuel injector assembly; and

at least one gripper mechanism that moves relative to the fuel injector assembly on the support portion, grasps a selected portion of the wire harness and pulls the wire harness in a direction away from the fuel injector assembly to thereby reveal whether a proper mechanical connection between the wire harness and the fuel injector assembly is established.

2. The system of claim 1, including a plurality of gripper mechanisms, the number of gripper mechanisms corresponding to a number of wire harness connections required for the fuel injector assembly.

3. The system of claim 1, including a plurality of holding members associated with the support portion to hold the fuel injector assembly in place.

4. The system of claim 1, wherein the physical connections include a plurality of clips associated with the wire harness, each clip being adapted to engage a corresponding portion on a corresponding fuel injector and wherein the gripping mechanism engages the clip.

5. The system of claim 4, wherein each clip includes a locking member and wherein the gripper mechanism includes a locking surface adapted to urge the locking member into a locked position.

6. A method of determining whether a physical connection between a wire harness and a fuel injector assembly is secure, comprising the steps of:

placing the fuel injector assembly in a secure position;

grasping a selected portion of at least one wire harness associated with the fuel injector assembly, using a gripper mechanism; and

pulling the wire harness in a direction away from the fuel injector assembly, using the gripper mechanism, to thereby reveal whether a proper physical connection between the wire harness and the fuel injector assembly has been made.

7. The method of claim 6, including rejecting an assembly when the step of pulling on the wire harness reveals that a proper physical connection has not been made.

8. The method of claim 6, including conducting an electrical continuity test after performing the step of pulling on the wire harness.

9. The method of claim 6, including marking the assembly when a proper physical connection has been verified.